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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,753	09/12/2003	John M. Koegler III	200310760-1	8167

22879 7590 09/17/2008

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT	PAPER NUMBER
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2627

NOTIFICATION DATE	DELIVERY MODE
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09/17/2008

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/661,753
Filing Date: September 12, 2003
Appellant(s): KOEGLER ET AL.

Robert C. Sismilich
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 1st, 2008 appealing from the Office action mailed March 23rd, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Application 10/661,722 contains similar subject matter and similar grounds of rejection, and has been appealed by the same attorney and applicant using nearly identical arguments.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2002/0191517	Honda et al.	12-2002
6,145,368	Klein	11-2000
5,119,363	Satoh et al.	6-1992
5,107,107	Osborne	4-1992
5,670,947	Nagashima	9-1997
6,109,324	Bugner et al.	8-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 5, 6, 8, 10, 20, 23-25, 34-38, 45-56, and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 2002/0191517) in view of Klein (US 6,145,368), and further in view of Satoh (US 5,119,363).

The claims will be addressed in order of dependency rather than numerical order.

Regarding claim 5:

Honda discloses:

An optical disk, comprising:

a label region on the optical disk comprising a writeable material (paragraph 30).

Honda does not disclose:

“substantially identical disk speed features, disposed on the disk in a first annular ring at a first radial position and located to be readable when writing the label region, to convey disk speed data; and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring at a second radial position different from the first radial position and located to be readable when writing to the label region, to convey disk angular orientation data, wherein at least some of the disk angular orientation features and at least some of the disk speed features have an overlapping angular position, and wherein the first annular ring abuts the second annular ring.”

However, note that Honda does disclose tracking the disk speed (paragraph 37) and the angular orientation (paragraph 38).

Klein discloses:

substantially identical disk speed features, disposed on the disk in a first annular ring at a first radial position, to convey disk speed data (Fig. 2: 104; column 1, lines 25-45); and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring at a second radial position different from the first radial position (Fig. 2: 102) to convey disk angular orientation data (column 1, lines 24-45), wherein at least some of the disk angular orientation features and at least some of the disk speed features have an overlapping angular position (apparent from Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda substantially identical disk speed features, disposed on

the disk in a first annular ring at a first radial position and located to be readable when writing the label region, to convey disk speed data; and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring at a second radial position different from the first radial position and located to be readable when writing to the label region, to convey disk angular orientation data, wherein at least some of the disk angular orientation features and at least some of the disk speed features have an overlapping angular position.

The motivation would have been to measure the disk speed and angular orientation directly from the disk, improving accuracy.

Honda in view of Klein does not disclose:

(A) “wherein the first annular ring abuts the second annular ring,” or

(B) “wherein the annular rings are proximate a central hub of the disc.”

Regarding (A):

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein wherein the second annular ring abuts the first annular ring.

The rationale is as follows:

Whether the first annular ring abuts the second annular ring makes no difference to its purpose: the speed and angular tracking works no better or worse whether the rings abut or not.

Furthermore, applicant's specification, as originally filed, does not disclose any benefit or reason to have the rings abut one another. Applicant merely discloses embodiments where they abut (as per Fig. 1) and other embodiments where they do not (as per Fig. 2).

It has been held (see, e.g., *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)) that shifting the position of a part is obvious when it does not modify the operation of the invention. Therefore shifting the position of the annular rings of Honda in view of Klein so that they abut would have been obvious to one of ordinary skill in the art at the time of the invention.

The motivation to abut them could have been aesthetic (one of ordinary skill might believe adjacent rings to be more visually appealing), or to save space (two abutting rings use less space on the disc than two with a space between them).

Regarding (B):

Satoh discloses wherein an annular ring used to track disc speed data and disc angular orientation data is proximate a central hub of the disk (Fig. 8; column 6, lines 2-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein where the annular rings are proximate a central hub of the disk.

The rationale is as follows:

Honda in view of Klein discloses the rings; Satoh shows putting rings proximate the central hub is a known technique; and one of ordinary skill could have combined these two teachings together with predictable results.

Regarding claim 2:

In Honda in view of Klein, and further in view of Satoh, the label region is on a label side of the optical disk (Honda paragraph 30).

Regarding claim 4:

In Honda in view of Klein, and further in view of Satoh, the optical disc includes a data side and a label side (Honda paragraph 30).

Regarding claim 8:

In Honda in view of Klein, and further in view of Satoh, the disk angular orientation features are molded (they are slits in the disk so they must be molded).

Regarding claim 10:

In Honda in view of Klein, and further in view of Satoh, the disk speed features are molded (they are slits in the disk so they must be molded).

Regarding claim 34:

In Honda in view of Klein, and further in view of Satoh, all the disk speed features have a substantially identical size and shape (apparent from Klein Fig. 2), and at least some of the disk angular orientation features have a different size or shape from the disk speed features (apparent from Klein Fig. 2).

Regarding claim 35:

In Honda in view of Klein, and further in view of Satoh, at least some of the disk angular orientation features have a different size from others of the disk angular orientation features (apparent from Klein Fig. 2).

Regarding claim 36:

In Honda in view of Klein, and further in view of Satoh, a pattern formed by the disk angular orientation features is not symmetrical about at least some axes extending outward from the center of the disk (apparent from Klein Fig. 2: since they are different sizes, the pattern is not symmetrical).

Regarding claim 37:

In Honda in view of Klein, and further in view of Satoh, a pattern formed by the disk angular orientation features about at least some axes extending outward from the center of the disk is different from the pattern formed by the disk angular orientation features about at least some other axes extending outward from the center of the disk (apparent from Klein Fig. 2).

Regarding claim 38:

In Honda in view of Klein, and further in view of Satoh, an angular span of each disk speed feature is substantially identical to an angular span between each two disk speed features (apparent from Klein Fig. 2).

Regarding claim 51:

In Honda in view of Klein, and further in view of Satoh, the location of the annular rings maximizes the size of a continuous area of the label region (since the rings are abutting, this is true).

Regarding claim 52:

In Honda in view of Klein, and further in view of Satoh, the label region has a ring shape that extends from an inner radial position to an outer radial position, and at least one of the first and second radial positions is closer than the inner radial position to the central hub (in Honda the label region was the entire disc: since now there are two rings for tracking, the label region has a ring shape outside the tracking area. Since the rings are proximate the central hub, they must be closer than the label to it).

Regarding claims 20, 23-25, and 53-56:

All elements positively recited have been identified with respect to earlier claims. No further elaboration is necessary.

Regarding claim 46:

Honda in view of Klein, and further in view of Satoh, discloses an optical disc as discussed above.

Honda in view of Klein, and further in view of Satoh, does not disclose “wherein the first radial position is nearer the central hub of the disk than the second radial position.”

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Satoh, wherein the first radial position is nearer the central hub of the disk than the second radial position.

The rationale is as follows:

Which of the two annular rings is closer to the central hub of the disk makes no difference to its purpose: the speed and angular tracking work no better or worse no matter which ring is inside or outside.

Furthermore, the applicant's specification, as originally filed, does not disclose any benefit or reason to have one ring inside the other.

It has been held (see, e.g., *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)) that shifting the position of a part is obvious when it does not modify the operation of the invention.

In this case there are only two possibilities: the first radial position is inside the second, or the second radial position is inside the first. With only two combinations, both solutions would have been obvious to one of ordinary skill in the art, and one of ordinary skill could have pursued the solution wherein one ring is inside the other with a reasonable expectation of success.

Therefore shifting the position of the annular rings of Honda in view of Klein, and further in view of Satoh, so that the first radial position is nearer the central hub of the disk than the second radial position, would have been obvious.

Regarding claims 47 and 48:

These claims are similar to claim 46 and similarly rejected.

Regarding claims 49, 50, and 57-60:

All elements positively recited have already been identified with respect to earlier rejections. No further elaboration is necessary.

Regarding claim 61:

In Honda in view of Klein, and further in view of Satoh, at least some of the disk angular orientation features are of different sizes (apparent from Klein Fig. 2).

Claims 3, 7, 12, 14, 15, 22, 33, 17, 39-41, and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Klein, and further in view of Satoh, as applied to the claims above, and further in view of Osborne (US 5,107,107).

Regarding claim 7:

Honda in view of Klein, and further in view of Satoh, discloses an optical disk as discussed above.

Honda in view of Klein, and further in view of Satoh, does not disclose wherein the disk angular orientation features are defined in a mirror region of the label side of the optical disk. Honda in view of Klein, and further in view of Satoh, discloses a transmissive scheme for the disk angular orientation features: light passes through slits and is measured on the other side of the disk.

Osborne discloses an alternative to a transmissive scheme: a reflective scheme wherein the disk features are pits defined in a reflective, or mirror region (column 6, lines 10-65). Osborne discloses that it is more sophisticated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Satoh, wherein the disk angular orientation features are defined in a mirror region of the label side of the optical disk.

The motivation would have been to use a more sophisticated scheme. Also, because the reflective scheme taught by Osborne does not require slits through the disk, Osborne's method has more surface area on the opposite side of the disk, the data side, which would allow more data to be recorded.

Regarding claim 3:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the disk speed features are configured to deflect incoming light (as discussed above).

Regarding claims 12:

As discussed above, Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, comprising a surface, distinct from the writable material, having markings to indicate disk angular orientation.

Regarding claim 14:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, does not disclose "wherein the markings comprise interspersed areas with and without substantially circular molded pits."

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses molded pits, just not that they are "substantially circular."

However, Osborne disclose that in an optical disc information can be indicated through a substantially circularly molded pit (column 8, lines 35-50).

It would have been obvious to one of ordinary skill in the art to include in Honda in view of Klein, and further in view of Osborne, wherein the second signal results when light is reflected by a substantially circular molded pit, as further taught by Osborne.

The rationale is as follows:

Using substantially circular molded pits to indicate information by monitoring a reflected light signal is the fundamental premise of all optical recording media, as attested by Osborne. Therefore one of ordinary skill in the art could certainly have created substantially circularly molded pits to create the signal required by Honda in view of Klein, and further in view of Osborne, with predictable results.

Regarding claim 15:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the molded pits define a light-deflecting feature (Osborne: column 6, lines 10-65).

Regarding claim 22:

This claim is similar to claim 14 and is similarly rejected.

Regarding claim 33:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, does not disclose wherein the first annular ring is configured for reading by an encoder and the second annular ring is configured for reading by an OPU.

Osborne compares a conventional encoder and an OPU. Osborne concludes that using an OPU can overcome the weaknesses of a conventional encoder (column 11, lines 25-60).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, wherein the first annular ring is configured for reading by an encoder and the second annular ring is configured for reading by an OPU.

The motivation would have been to avoid the weaknesses of a conventional encoder when reading the second annular ring.

Regarding claim 17:

All elements positively recited have already been identified with respect to earlier claims. No further elaboration is necessary.

Regarding claim 39:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the light-deflecting feature has a surface that is not perpendicular to incoming light applied to read the markings (at the very least the walls of the pit are parallel to, rather than perpendicular to, the incoming light).

Regarding claim 40:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the molded pits deflect both coherent and incoherent light (both types of light would be deflected by the pits).

Regarding claims 41 and 43-45:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses all elements positively recited in these claims as discussed with regards to previous rejections.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Klein, and further in view of Satoh, and further in view of Osborne as applied to the claims above, and further in view of Bugner et al. (US 6,109,324).

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses an optical disk as discussed above.

Honda in view of Klein, and further in view of Osborne, does not disclose wherein the disk angular orientation features comprise markings within the label region.

Bugner discloses printing a disk angular orientation feature (column 3, line 65 to column 4, line 10: this then, is a disk angular orientation feature that comprises markings within the label region). Bugner discloses that this allows a secondary image to be printed in registration with the primary image (column 4, lines 1-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Osborne, wherein the disk angular orientation features comprise markings within the label region.

The motivation would have been to allow printing a secondary image in alignment with a primary image.

Claims 13, 21, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Klein, and further in view of Satoh, and further in view of Osborne as applied to the claims above, and further in view of Nagashima (US 5,670,947).

Regarding claim 13:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses an optical disk wherein the markings define a light-deflecting feature, as discussed above.

Honda in view of Klein, and further in view of Osborne, does not disclose wherein the markings comprise a molded saw tooth to deflect light from a sensor.

Nagashima discloses a molded saw tooth can deflect light from a sensor (column 3, lines 25-45).

It would have been obvious to one of ordinary skill in the art to include in Honda in view of Klein, and further in view of Osborne, wherein the light-deflecting features are a molded saw tooth to deflect light from a sensor, because a molded pit and a molded saw tooth are used in the same environment, for the same purpose, and achieve the same result.

Regarding claim 21 and 42:

All elements positively recited have already been identified with respect to earlier rejections. No further elaboration is necessary.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 2002/0191517) in view of Klein (US 6,145,368).

Regarding claim 49:

This claim was rejected as unpatentable over Honda in view of Klein and further in view of Satoh above; this is an alternate rejection of the claim.

Honda discloses:

An optical disk, comprising:

a label region on the optical disk comprising a writeable material (paragraph 30).

Honda does not disclose:

“substantially identical disk speed features, disposed on the disk in a first annular ring, to convey disk speed data; and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring.”

However, note that Honda does disclose tracking the disk speed (paragraph 37) and the angular orientation (paragraph 38).

Klein discloses:

substantially identical disk speed features, disposed on the disk in a first annular rim, to convey disk speed data (Fig. 2: 104; column 1, lines 25-45); and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring (Fig. 2: 102) to convey disk angular orientation data (column 1, lines 24-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda substantially identical disk speed features, disposed on the disk in a first annular ring,, to convey disk speed data; and

disk angular orientation features different from the disk speed features, disposed on the disk in a second annular ring, to convey disk angular orientation data.

The motivation would have been to measure the disk speed and angular orientation directly from the disk, improving accuracy.

Honda in view of Klein does not disclose:

“wherein the first annular ring abuts the second annular ring and is nearer a central hub of the disk than the second annular ring.”

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein wherein the second annular ring abuts the first annular ring and is nearer a central hub of the disk than the second annular ring.

The rationale is as follows:

Whether the first annular ring abuts the second annular ring, and which ring is nearer the center of the disc, makes no difference to its purpose: the speed and angular tracking works no better or worse whether the rings abut or not.

Furthermore, applicant's specification, as originally filed, does not disclose any benefit or reason to have the rings abut one another. Applicant discloses embodiments where they abut (as per Fig. 1) and other embodiments where they do not (as per Fig. 2).

It has been held (see, e.g., *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)) that shifting the position of a part is obvious when it does not modify the operation of the invention. Therefore shifting the position of the annular rings of Honda in view of Klein so that they abut would have been obvious to one of ordinary skill in the art at the time of the invention.

The motivation for abutting the rings could have been aesthetic (one of ordinary skill might have thought abutting rings looked better), or to save space (two abutting rings take up less space than two rings with a space between them).

Since one ring must be inside the other, and there are only two possible combinations. With only two combinations, both solutions would have been obvious to one of ordinary skill in the art, and one of ordinary skill could have pursued the solution wherein one ring is inside the other with a reasonable expectation of success.

(10) Response to Argument

Applicant makes numerous arguments in their appeal brief. They are organized into an outline structure with headings, sub-headings, and sub-sub-headings. For convenience and clarity, these arguments will be addressed using the same outline structure presented by Applicant.

Before the specific arguments are addressed, a few general points will be made. Applicant's arguments basically fall into two types: that "improper hindsight" was used, or that the trivial rearrangement of the location of elements would not have been obvious.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to Applicant's arguments regarding the rearrangement of parts, there are only two rings on the disc. Whether these rings are next to one another, or slightly spaced, or whether they are on one side of the disc or another, or whether one is inside another or outside the other has no effect on the operation of the claimed disc drive. Since there are only a limited number of possible arrangements of two circular rings on a disc, one of ordinary skill could certainly have envisioned all of these possibilities, and implemented any of them with a reasonable expectation of success. As such, they would have been obvious.

Regarding Applicant's specific arguments:

"Claims 2, 4-5, 8, 10, 20, 23-25, 34-38, 47-56, and 57-58 were improperly rejected..."

In this section, Applicant argues that the 103 rejection of these claims as unpatentable over Honda in view of Klein and further in view of Satoh is improper.

"1. The cited references...do not teach or suggest all the limitations of...claim 5"

"a) The feature of a first annular ring abutting a second annular ring, and the annular rings proximate a central hub of the disk is absent from the combined references, and modifies the operation of the invention."

In the rejection of this claim, the Examiner had admitted that the prior art does not disclose wherein the two rings are "abutting," but argued that to move the rings until they abutted was nonetheless obvious because it does not modify the operation of the device.

Applicant's argument is that moving the rings does modify the operation because it changes the size of the continuous, uninterrupted area of the label region.

First, rearranging the rings so that they abut does not modify the operation of the claimed disc drive. The rings are used for speed and/or rotation control, and they work exactly the same whether they abut or not. Moving them does not improve the speed or rotating tracking or change how it works in any way: they function exactly the same way in either case.

Second, whether the label region is uninterrupted or not is not an engineering choice, but rather an aesthetic one. Since the rings function exactly the same way whether or not they abut, from an engineering standpoint there is no difference between the two. Whether there is an interruption in the continuous area is instead an aesthetic choice, and as such is not a patentable difference.

This argument is supported by Applicant's own disclosure: Applicant discloses embodiments where the rings abut (Fig. 1) and embodiments where they do not (Fig. 2), with no disclosure or evidence that one is superior to the other.

To create an analogy: if someone had patented a disc with a dividing line drawn on it, would a disc where that line is shifted to one side or the other be patentable over it? That is the only difference between Applicant's disclosure and the prior art: that a line on the disc has been moved to a different place. Otherwise they work identically.

Third, the advantage Applicant recites (having a larger continuous area) would itself have been obvious to one of ordinary skill at the time of the invention, and in and of itself provides further motivation for modifying the prior art in the manner suggested

by the Examiner. Applicant cannot seriously be contending that it never would have occurred to anyone to put two things closer together before their disclosure.

“2. The cited references does not teach...all the limitations of...claims 20, 25, and 49, for similar reasons...”

This is merely a repeat of the above arguments and is similarly not persuasive.

“3. The Examiner used impermissible hindsight to combine the Honda, Klein, and Satoh references.”

“a. The Klein reference is non-analogous art...”

Here Applicant argues that because Klein is directed to a rotary encoder rather than an optical disk drive it is “non-analogous” art.

However, Klein is directed to tracking the speed and/or angle of a rotating disc. An optical disc drive contains a rotating disc, and Honda discloses that the speed and angle need to be tracked. Therefore even though Klein is not specifically directed to optical disc drives, it is directly on-topic for the problem at hand: tracking the speed and angle of the rotating disc of Honda. As such it is “reasonably pertinent to the specific problem with which the inventor was involved.”

“b. Because the Examiner has not provided any evidence that resolves or specifically defines the level of ordinary skill in the pertinent art, any assertion as to what would be obvious to a person having ordinary skill in the art is improper.”

Although it was never explicitly stated, the level of ordinary skill has been implicitly defined through the rejections made. The contention is that one of ordinary skill in the field of optical disc drives, who undoubtedly has advanced degrees and/or

experience in engineering and/or optics, is capable of understanding that markings used to track the speed and angle of one disc could be used in an identical fashion on another disc. If Applicant disagrees with this assertion they are welcome to submit evidence that one of ordinary skill would not find this obvious.

In this section, Applicant also argues that the rejection is “riddled with hindsight” because only one teaching of Satoh was used in the rejection. Satoh is only relied upon to show that the tracking features could be on the inside rather than the outside of the disc: although this feature is probably in and of itself obvious, Satoh was relied upon to show that it had specifically been done before. Just because only this one teaching of Satoh was used does not mean that the rejection is “riddled with hindsight,” it merely means one of ordinary skill would have known this teaching and used it.

“4. The Honda, Klein, and Satoh references are not properly combinable in that the combination would result in an inoperative device...”

Here Applicant argues if the rings of Klein were moved to the inner circumference of Klein, Klein would become inoperable. In other words, if the teaching of Satoh were applied to Klein, Klein wouldn't work.

This argument is irrelevant. The question should not be whether Klein would be rendered inoperable by the teaching of Satoh, but whether Honda in view of Klein would be rendered inoperable. The rejection is not Klein in view of Satoh but Honda in view of Klein and further in view of Satoh.

Applicant's argument is that the disc of Klein is so small that if the rings were moved to the inner circumference, it wouldn't work. However, the disc of Honda in view

of Klein is the disc disclosed by Honda. This disc is exactly the same size as the one disclosed by applicant: e.g., a CD or DVD. Therefore if the rings of Klein were put on the disc of Honda, as per the rejection, they could be moved anywhere on the disc and still function.

Applicant argues that it is improper hindsight to ignore the size of Klein's disc, but this argument makes no sense. Klein has been relied upon only to teach a pattern used for tracking the speed and/or angle of the disc. The disc in question remains the disc of Honda. It would make no sense at all to incorporate the size of Klein's disc into Honda because then the disc would no longer function as a CD or DVD.

Applicant makes a second argument in this section. Applicant argues that Satoh "teaches away" from the combination because Satoh discloses groove-like tracks used for reading and writing data from the disc.

Again, Satoh has only been relied upon to teach one very simple element: that markings used for speed and/or angle tracking can be aligned around the inner circumference of the disc. This element is so obvious it hardly even requires Satoh. The rest of Satoh is completely irrelevant to the combination relied upon, and Applicant's arguments here do not have anything to do with the teaching relied upon.

It is not "impermissible hindsight" to rely on only one teaching from a reference. Any combination of references necessarily includes only those elements from the reference that are relevant to the problem at hand. It would be impossible to construct any 103 rejection if every element from every reference had to be used in the combination.

“B. Claims 46-48 were improperly rejected...”

“1. the rejection of dependent claim 46 is improper for the same reasons...”

This section merely repeats the earlier arguments and is not persuasive for the same reasons.

“2. The cited references...do not teach or suggest all the limitations of Appellants’ dependent claim 46.”

“a) The feature that a first radial position...is nearer that the central hub of the disk...is absent...and modifies the operation...”

Here the Examiner had argued that which ring is inside the other makes no difference in the operation of the invention.

Applicant argues that it would modify the operation because it changes which elements of the disk drive read the disk speed and which read the disk angular orientation features.

This argument might be compelling if the claim in question recited which elements of the drive read the disk angular orientation features. However, it does not. Applicant cannot argue that the rejection would modify the operation of a part of the invention that is not even claimed.

In Honda in view of Klein, and further in view of Satoh, the features are read by encoders, and whether one ring is inside the other or vice versa makes no difference. Therefore switching the position of the two rings would not modify the operation of Honda in view of Klein, and further in view of Satoh, in any way.

Also, the Examiner had argued that since there are only two possibilities (one inside the other or vice versa) both arrangements would immediately be obvious to one of ordinary skill. In their arguments, Applicants has presented several other possible combinations of rings. In response to this, first, Applicant still has not presented so many possibilities that one of ordinary skill couldn't have conceived of all of them, and second, Applicant's proposals ignore the teaching of Klein, which proposes two rings rather than combined rings, partial rings, and all the other arrangements Applicant has thrown about. When the teaching of Klein is applied to Honda, there are only two circular rings, and one has to be inside the other or vice versa.

"3. The cited reference does not teach or suggest all the limitations of Appellants' dependent claims 47-48, for similar reasons..."

These are just repeats of the previous arguments and are no more persuasive here.

"C. Claims 59-61 were improperly rejected..."

"1. The Examiner utilized impermissible hindsight..."

"2. ...would result in an inoperative device."

These are just repeats of the previous arguments and are no more persuasive here.

"D. Claims 3, 7, 12, 14-15, 17, 22, 39-41, and 43-45 were improperly rejected..."

"1. The rejection...is improper for the same reasons..."

"E. Claim 33 was improperly rejected..."

"1. The rejection..is improper for the same reasons..."

These are just repeats of the previous arguments and are no more persuasive here.

“2. The cited references...do not teach...all the limitations...”

“a) The feature wherein the first annular ring is configured for reading by an encoder and the second annular ring is configured for reading by an OPU is absent from the combined references.”

First, the Applicant identifies a supposed contradiction in the Examiner's argument. Here, all the Examiner was asserting was that the embodiment of Honda, Klein, Satoh, and Osborne as previously relied upon did not teach all elements of this claim and therefore an additional teaching from Osborne was required.

Next Applicant argues that Osborne doesn't disclose a disc drive that uses an encoder to read one ring of features and an OPU to read another.

Nonetheless such a drive would have been obvious given Osborne.

Honda in view of Klein, and further in view of Satoh, discloses a disc drive that uses encoders to track both rings of features. Osborne discloses that an optical pickup of the type used in disc drives can do everything an encoder can do, but better. Therefore, given the teaching of Osborne it's definitely obvious to replace an encoder with an optical pickup.

In this section, Applicant makes two arguments against this combination. The first is that if the pickup were used to read the disc orientation features, the head would have to move away in order to write and would lose its view of the track on the disc. Thus it would no longer be "actively self-aligning."

The actively self-aligning property is not required for the combination of Honda, Klein, Satoh, and Osborne to function. This feature of Osborne was not relied upon in the 103 rejection and is not necessary to provide motivation for the combination (in column 11, lines 25-60 Osborne discloses multiple reasons why a pickup is better). Just because Osborne discloses features that are not present in the combination does not make the combination any less obvious.

Applicant's second argument is that Osborne doesn't disclose that an encoder can be used for one set of features and an optical pick-up for another set.

Nonetheless, Osborne discloses that both encoders and pickups can be used for the same purpose. Therefore it would be no difficulty for one of ordinary skill in the art to envision using two encoders, two pickups, or one of each. There's only a limited number of possibilities, so one of ordinary skill could have envisioned all of them and used any of them with predictable results.

"3. ...there is no articulated reason with some rational underpinning to modify or combine the reference teachings..."

Here Applicant admits that Osborne does disclose a pickup is better than an encoder, but argues that Osborne would then teach that a pickup should be used for both rings of features rather than just one.

However, since the base reference (Honda, Klein, and Satoh) teaches using an encoder for both rings of features, it definitely would be obvious to one of ordinary skill that an encoder could be used for either one. Even if it would also be obvious, given Osborne, to replace both encoders with pickups it is equally obvious to replace just one

of them: even replacing one would still provide an improvement over the base reference, and so there is still motivation to do it.

Also, since the optical pickup of Honda, Klein, Satoh, and Osborne is also used to write the label to the disc, there are obvious reasons not to use the pickup to track every ring: having one pickup track two rings and write to the disc might be more than it can handle. One of ordinary skill would have been more than capable of judging the limitations of the pickup and using an encoder for the extra ring if necessary.

“4. There would be no reasonable expectation of success in combining the...references in that the OPU would be inoperative either to read the second annular ring of features on the optical disk or to mark the writable material in the label region of the optical disk.”

Here Applicant again argues that Osborne discloses the pickup is “actively self-aligning” and that a self-aligning pickup cannot maintain its position over the track and simultaneously write the label.

Again, this self-aligning nature of Osborne is not present in Honda, Klein, Satoh, and Osborne. Applicant is arguing a feature of Osborne individually that is not present in the combination, and therefore not relevant to the rejection.

If the pickup is not self-aligning, the combination would work perfectly. This is evidenced by the fact that it is essentially identical to Applicant’s disclosed invention.

“F. Claim 9 was improperly rejected...”

“G. Claims 13, 21, and 42 were improperly rejected...”

“1. The rejection of dependent claims...is improper for the same reasons”

"H. Claim 49 was improperly rejected..."

"1. The cited references...do not teach or suggest all the limitations..."

"a) The feature..is absent"

"b) the feature..is absent"

"2. The Examiner utilized impermissible hindsight..."

These sections all repeat earlier arguments that are no more persuasive here.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

CRL 9/5/08

Conferees:

/WY/

Wayne Young
Supervisory Patent Examiner, Art Unit 2627

/Joseph H. Feild/

Supervisory Patent Examiner, Art Unit 2627